Amendments to the Specification:

On page 1, prior to the first paragraph which begins on line 1, please insert the following:

FIELD OF THE INVENTION

On page 1, prior to the second paragraph which begins on line 3, please insert the following:

BACKGROUND OF THE INVENTION

On page 2, prior to the paragraph which begins on line 13, please insert the following:

SUMMARY OF THE INVENTION

Please replace the paragraph which begins on page 2, line 13 and ends on line 18, with the following rewritten paragraph:

An object of the invention, therefore, is to provide an improved pressure sensor of the above-described type. The object is achieved according to the invention by the pressure sensor as ~~defined in the independent claim 1~~ comprising: a pressure cell having an essentially cylindrical platform of a first diameter and a first thickness, and a measuring membrane of a second diameter and a second thickness, joined to an end face of the platform; an elastic sealing ring of a third diameter and a third thickness, bearing against the membrane-containing end face of the pressure measuring cell; and a support ring of a fourth, outer diameter, a fourth inner diameter and a fourth thickness, wherein: the support ring supports the membrane-far, rear face with the pressure measuring cell, the measuring cell is axially clamped between the elastic sealing ring and the support ring, and the dimensions of the support ring are matched to the dimensions of the sealing ring and the pressure measuring cell in such a way that a radial deformation of the membrane-containing face caused by the axial clamping of the pressure measuring cell is so small, that the span error of the pressure sensor due

to a reduction of the axial clamping force by at least 10% amounts to not more than 0.02%, and by the method for designing a pressure sensor ~~as defined in the independent claim 12~~ comprising the steps of: (i) determining a geometry for the support ring; (ii) calculating a first span change of the pressure sensor under a first axial clamping force; (iii) calculating a second span change of the pressure sensor under a second axial clamping force; (iv) ascertaining a span error by comparing the first span change with the second span change; (v) evaluating the span error; and (vi) varying the geometry of the support ring, and repeating the steps (ii) to (vi) until a suitable geometry for a sufficiently small span error is found.

Please replace the paragraph which begins on page 2, line 19 and which ends on line 33, with the following rewritten paragraph:

In efforts to improve a pressure sensor, ~~the inventors of the present invention have been able to identify~~ a further source of disturbing radial forces has been identified and substantially eliminated ~~to eliminate them~~. A basic idea of the invention will now be explained on the basis of Fig. 2. The platform of a pressure measuring cell should be sufficiently stiff, such that it does not deform when loaded by pressure. However, this is naturally not an absolute, but, rather, only an idealized statement, because the modulus of elasticity of the material of the platform is inherently a finite quantity. So, on the basis of calculations using the finite element method (hereinafter FEM), it was determined, that the axial clamping of the pressure measuring cell 6 between a sealing ring 8 and a support ring 2 can lead to an elastic deflection of the rear side of the platform of about 10 nm to 100 nm in the axial direction.

Please replace the paragraph which begins on page 6, line 19 and which ends on line 28, with the following rewritten paragraph:

The invention will now be explained on the basis of an example of an embodiment presented in the accompanying drawing, the figures of which show as follows:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a section through a pressure sensor of the invention;

Figs. [[2a-c]] 2(a)-2(c) are schematic representations of the radial deformation of a pressure measuring cell on the basis of axial clamping forces; and

Figs. [[3a-c]] 3(a)-3(c) show the FEM data regarding the deformation of a pressure measuring cell under axial clamping forces.

On page 6, prior to the paragraph which begins on line 29 , please insert the following:

DETAILED DESCRIPTION